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ARRANGEMENT FOR VERIFYING RANDOMNESS OF TBEB ALGORITHM IN A MEDIA ACCESS CONTROLLER

ABSTRACT OF THE DISCLOSURE

A testing arrangement is configured for evaluating the randomness of a number generated by a network device under test configured for sending a data packet on a network medium and generating a random number for an idle interval for a sensed collision. The testing arrangement includes a collision generator configured for generating a collision in response to transmission of the data packet on the network medium, and an analyzer configured for identifying time intervals that the network device under test is transmitting on the network medium. The analyzer, having detected a prescribed minimum number of the identified time intervals, analyzes the identified time intervals to determine the randomness of the random numbers generated by the network device under test. The collision generator may be implemented as a physical layer transceiver configured in a loopback mode, or a packet generator configured for outputting onto the network medium a colliding packet in response to detection of the data packet on the network medium. Hence, the identified time intervals can be used to determine whether sufficiently random numbers are generated for collision mediation according to the IEEE 802.3 TBEB algorithm.